



MEMO

To: Idaho Water Resource Board
From: Cynthia Bridge Clark
Subject: Storage Water Study Status
Date: July 10, 2009

The following is a summary of the status of storage water projects under study by the Idaho Water Resource Board.

Boise River Basin Interim Feasibility Study

At the last Idaho Water Resource Board (IWRB) meeting on May 29th, 2009, a contract between the IWRB and the U.S. Army Corps of Engineers (Corps) was signed to implement the Boise River Interim Feasibility Study. The IWRB will partner with the Corps as the non-federal study sponsor. Total study costs are estimated to be \$1,740,000, of which \$870,000 is the federal contribution, \$500,000 is a credit to the IWRB for previous work in the Boise River drainage as authorized in the Water Resources Development Act of 2007, \$37,000 is to be provided by the IWRB for future in-kind services, and an estimated \$333,000 is to be provided by the IWRB from the Aquifer Planning and Management Fund.

A meeting was held on June 29th, 2009 at the Corps' District office in Walla Walla, Washington to coordinate the Project Development Team and technical staff working on the project. The Corps has since begun data gathering efforts and literature review, and is in the process of awarding a contract to perform hydraulic modeling and floodplain delineation of the Lower Boise River.

The interim feasibility study will document existing conditions, describe existing flood risks and provide an assessment of storage opportunities in the Boise River basin. Preliminary level designs, cost estimates, schedules, and a summary of social and environmental constraints for a short list of storage options will be generated through the study.

Teton Basin Storage Appraisal Study

The 2008 Idaho Legislature passed House Joint Memorial No. 8 which encouraged the IWRB to evaluate additional storage projects in the State of Idaho including but not limited to the replacement of the Teton Dam in the Teton River drainage. The 2008 Legislature also passed and approved Senate Bill 1511 which directed the IWRB to investigate additional surface water storage and appropriated funds to the Revolving Development Account to pay the estimated costs of \$400,000 for the study of storage in the Teton Basin.

On May 29th, 2009, the IWRB approved a resolution authorizing expenditure of up to \$400,000 from the Revolving Development Account for the Teton Basin Storage Appraisal Study and authorizing the IWRB's Chairman to execute a contract with Reclamation to carry out the study. A Memorandum of

Agreement between the IWRB and the U.S. Bureau of Reclamation (Reclamation) was subsequently signed on June 26, 2009 to implement the study with the IWRB as a study sponsor. Total study costs are estimated to be \$800,000, of which \$400,000 is the federal contribution and \$400,000 is to be provided by the IWRB from the Revolving Development Account.

The study will build on existing information to evaluate the potential for new surface water storage in the Teton Basin to address current and future water supply needs in the Upper Snake River Basin. It will document existing conditions, and provide appraisal level engineering designs, cost estimates, schedules, and a summary of social and environmental constraints for a short list of surface water storage options.

Galloway Dam Feasibility Study

House Joint Memorial No. 8 passed by the 2008 Idaho Legislature identified the study of the Galloway Dam on the Weiser River in encouraging the IWRB to evaluate additional storage projects in the state of Idaho. A decision unit for Galloway Dam Feasibility Study was initially included in the Department's budget. Due to budget constraints, the Governor did not recommend the use of General Funds in the Executive Budget, but encouraged pursuit of private funding from other stakeholders.

Board staff has been negotiating funding for the feasibility study of the Galloway Dam from a private entity. The study is intended to build on earlier study efforts by the U.S. Army Corps of Engineers, the U.S. Bureau of Reclamation, and the Idaho Water Resource Board, and will focus on development of a dam and reservoir facility with a design storage capacity of up to 900,000 acre-feet, identification of the maximum hydroelectric power potential, and consideration of the logistics of geothermal development in and around the anticipated reservoir inundation area.

Funding negotiations were initially focused on expansion of the scope of work to integrate geothermal development in the area. Discussions are currently focused on ensuring that the intent of the study is accomplished for both the State and the private entity without incurring liability or committing the State to future indebtedness beyond the year of appropriation. Given the expectations of the investors, the Governor's Office has been informed of the project status to provide an opportunity to weigh in on negotiations to finalize the agreement. The attached memorandum was provided to the Governor's Office by then IDWR Director Tuthill.

Total study costs are estimated to be one million dollars and the study is intended to be completed in approximately one year.

Minidoka Dam Raise Special Study

The IWRB and Reclamation entered into a contract to carry out the Minidoka Dam Raise Special Study to investigate the structural raising of Minidoka Dam to accommodate a 5-foot rise in normal reservoir water surface elevation. Reclamation staff continues to execute the engineering, hydrologic studies, and property impacts studies.

MEMO



To: Dave Tuthill *DT*
Thru: Hal Anderson, Brian Patton
From: Cynthia Bridge Clark
Subject: Galloway Dam Feasibility Study Status
Date: June 24, 2009

The following is a summary of the efforts undertaken by the Idaho Water Resource Board (IWRB) and the Idaho Department of Water Resources (IDWR) to secure funding for a feasibility study of the Galloway Dam and Reservoir on the Weiser River.

Background

The 2008 Idaho Legislature passed House Joint Memorial No. 8 that recognized the need for additional water supplies in the State of Idaho and requested that the IWRB undertake studies of additional water storage projects including the proposed Galloway Dam on the Weiser River in Southwest Idaho. The Weiser River does not currently have a major reservoir, but several have been proposed in the past. The proposed project operations and expectations have changed over time to meet a broader range of water needs. Changes have also occurred in the area that may impact the costs and value of the project. A reservoir at the Galloway site could provide a reliable source of water for irrigation and salmon flow augmentation in the Snake River, generation of hydroelectric power, enhanced recreational and fishery opportunities, and flood control. It also has the potential to help resolve some of the water supply problems that exist in the Upper Snake and Boise River basins.

In addition to the suitability of the location as a dam site, the inundation area of the proposed Galloway reservoir overlays a notable geothermal resource site called the Crane Creek Known Geothermal Resource Area (KGRA). Geothermal power developers are actively exploring the KGRA and have acquired geothermal leases on both state and private lands. The State of Idaho and Agua Caliente, LLC (Agua), a geothermal development company, recognize the potential benefits of both efforts and have been working together to identify how the two projects can co-exist and optimize the development of both hydroelectric and geothermal power.

Study Funding

A decision unit for the Galloway Dam Feasibility Study (feasibility study) was initially included in the IDWR's FY 2010 budget. Due to serious budget shortfalls, use of General Funds was not recommended in the Governor's Executive Budget, but the IWRB and the IDWR were encouraged to pursue private funding from other stakeholders.

Agua expressed interest in working with the IWRB to evaluate the feasibility of the Galloway Dam, and in particular, to identify whether a geothermal power facility and water storage project can co-exist in the basin. On that basis, Agua proposed to provide funding for a study that would evaluate not only the feasibility of developing the Dam but also the feasibility of integrating the reservoir and geothermal power facilities. This includes optimizing the development of hydroelectric and geothermal power, and coordination of transmission lines, powerplant facilities, property and access impacts, recreational development, and environmental compliance requirements.

A proposed contract between the IWRB and Agua was drafted in which Agua agreed to provide funding up to the estimated study costs of \$1,000,000 for implementation of the Galloway Dam Feasibility Study. Both parties anticipated that a consultant would need to be hired to perform the study while the IWRB would provide project management and other in-kind services. Agua would provide necessary data and information for evaluation of the requirements for integration of the geothermal power plant and associated facilities. Funds would be deposited and managed through the IWRB's Revolving Development Account.

Contract Status

Staff from the IWRB and the Office of the Attorney General and have been working closely with attorneys for Agua to develop an agreement to initiate the feasibility study. Initial efforts were focused on expanding the scope of the study to include evaluation of the requirements for integration of an existing geothermal power facility with construction and operation of a dam and reservoir. In refining the agreement to fund the proposed study, Agua recently indicated for the first time, through its attorneys, that if the Galloway Dam and Reservoir Project proceeds forward with construction, the State must provide assurance to Agua to pay the costs of constructing facilities determined to be necessary to integrate any then-existing or planned geothermal facilities developed by Agua into the construction of the Galloway Dam and Reservoir Project. In continuing to move forward with its geothermal project, Agua and its investors are concerned about the possibility of condemnation and want assurance that the proposed agreement is presently binding on the State, and will bind the State and all arms of state government in the future including subsequent legislatures and governors.

The IWRB and IDWR staff have consulted with the Attorney General's office and communicated to Agua's attorneys the limits of the IWRB's authority to bind the state in regards to future appropriations. IDWR and IWRB Staff have emphasized that State government is supportive of the cooperative project and recognizes the long-term benefits to the State. Recognizing that the State and the IWRB do not have the legal authority to bind the State to future indebtedness, IWRB proposed alternative language emphasizing the State and IWRB's commitment to use its best efforts to integrate existing facilities in the future and to cooperate with other federal and state agencies to support Agua's effort to develop geothermal resources in the project area.

Agua's principals continue to express a willingness to meet to discuss these issues but appear hesitant to go forward and provide money for the study without some assurances from the State to pay for integration measures in the future.

In evaluating the potential for new surface water storage in the State of Idaho, the Galloway Dam site has been recognized as a notable site for consideration. Staff will continue to look for additional sources of funding for the feasibility study even if an agreement can not be reached with Agua. In the event adequate funding is not identified, the IWRB and IDWR plan to coordinate with the Office of the Governor about approaching the Idaho Legislature for funding in the future.



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